REMARKS/ARGUMENTS

Claims 1-2, 4-10, 12-18, and 20-29 are pending in the present application. By the present action, claims 3, 11, and 19 are cancelled, claims 1-2, 9-10, 17-18, and 25-26 are amended, and claims 27-29 are added. Reconsideration of the claims is respectfully requested.

I.   **35 U.S.C. § 102, Anticipation: Claims 1-2, 4-6, 9-10, 12-14, 17-18, and 20-22**

Claims 1-2, 4-6, 9-10, 12-14, 17-18, and 20-22 stand rejected under 35 U.S.C. §102(b) as being anticipated by Davis *et al.*, System for Displaying Insertion Text Based on Preexisting Text Display Characteristics, U.S. Patent No. 5,495,577, February 27, 1996 (hereinafter "Davis"). This rejection is respectfully traversed.

Regarding claim 1, the rejection states:

Davis discloses the method steps of:
retrieving a data value from a character stream (col. 6, ll. 14-16); and
determining a validity of a character represented by said data value in response to
a member of a data structure, said member having a direct correspondence to said data
value, wherein said validity is determined in response to a logical combination of
status values in said member of said data structure (col. 6, ll. 16-23).

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Claim 1 has been amended to more clearly recite an embodiment of the invention, reciting that the data value must first be located in a data structure and then a group of corresponding status values can be checked to determine whether the data value is valid. These amendments are supported by the specification on page 8, lines 3 through page 9, line 27.

Claim 1, as amended, reads:

1.   A computer-implemented character validation method comprising the steps of:
retrieving a data value from a character stream; and
determining a validity of a character represented by said data value by locating a
member of a data structure, said member having a direct correspondence to said data
value, wherein said validity is determined according to a logical combination of a
plurality of status values in said member of said data structure.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983).

Davis does not anticipate the method of claim 1 because this patent does not show the feature of *"determining a validity of a character represented by said data value by locating a member of a data structure, said member having a direct correspondence to said data value, wherein said validity is determined according to a logical combination of a plurality of status values in said member of said data structure"*. More specifically, **Davis** does not determine the *validity* of the character and the test **Davis** does make (for presence in a font) does not make a determination according to a *logical combination of a plurality of status values*.

    The cited excerpt of **Davis** states:

> FIG. 3 sets ,forth [sic] the detailed logic for finding a font in accordance with the subject invention. Processing commences at function block 310 where the text stream is obtained and a pointer to the initial character is identified. Then, at decision block 320, each character y from the initial character to the beginning of the text is checked and a determination is made at decision block 330 to <u>determine if the character is available in the y's font</u>. If the character is available, then the font is returned at terminal 370. If the character is not available, then decision block 320 is executed to determine if additional characters remain for processing. When all characters have been processed backward, then another loop is commenced at decision block 340 for each character x from z until the end of the text to <u>determine at decision block 350 if z is available in x's font</u>. If a font is available, then the font is returned at terminal 370. If not, then the next character is processed at decision block 340 until all characters are processed. Then, at function block 360, a list of fonts is created and at decision block 380, the current character is checked against each font in the list to attempt to identify a mapping. If a mapping is obtained, then the font is returned via terminal 370. If no mapping is obtained, then font not found is returned via terminal 390.

Davis, column 6, ll. 13-35

    First, this excerpt shows that **Davis** checks each character in a string to determine whether the character is available in a given font. Determining whether a character is available in a given font is not the same as determining whether the character is valid and would not be viewed by one of ordinary skill in the art as performing the same function. While both actions perform a comparison on a character from a character stream, the results are not the same. **Davis** is looking to display a character, not determine its validity. **Davis** only determines the form in which it will be displayed. If **Davis** does not find the character in a specific mapping table, this reference will look for other mapping tables that <u>can</u> display the desired character; this patent does not declare a character invalid. Secondly, the multiplicity of character mapping tables means that if a character in **Davis** is not found in the mapping table for a given font, then other font mapping tables must be identified and checked. This is in contrast to the invention recited in claim 1 in which the validity of a character is determined by a <u>single</u> lookup in which a *"logical combination of a plurality of status values"* designates whether the data value is a valid character. The data structure recited in claim 1 can test whether the data value belongs to a group of valid character types; the claimed data structure does not need to compare the data value to each possibility separately.

Thus, **Davis** does not meet the step of "*determining a validity of a character represented by said data value by locating a member of a data structure, said member having a direct correspondence to said data value, wherein said validity is determined according to a logical combination of a plurality of status values in said member of said data structure*" and the rejection of claim 1 is overcome.

Claims 9 and 17 are rejected for reasons similar to claim 1; therefore the rejection of these claims is also overcome. Further, since claims 2, 4-6, 10, 12-14, 18, and 20-22 each depend from one of claim 1, claim 9, or claim 17, the same distinctions between **Davis** and the invention recited in claim 1 applies also to these claims. Additionally, the dependent claims recite additional combinations of features not suggested by the reference.

Claim 2 has been amended to include the features of claim 3 and is discussed in the rejection of that claim.

Claim 5 recites, "*comprising the step of, if each character in said character stream is valid, applying a predetermined set of syntactic rules to byte patterns comprising said character stream*". Although the rejection cites the excerpt quoted above, Applicants cannot see the relevance of the cited excerpt to this claim. **Davis** determines whether or not each character can be found in a mapping table and returns either a designation of a font or a message of no font found. Neither of these responses would equate to applying a set of syntactic rules to byte patterns of the character stream. This claim is separately allowable.

Therefore, the rejection of claims 1-2, 4-6, 9-10, 12-14, 17-18, and 20-22 under 35 U.S.C. § 102(b) has been overcome.

Furthermore, **Davis** does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. **Davis** does not make any suggestion that the methodology it teaches can be modified to determine whether a character is valid within a given character stream, as in the presently claimed invention. Additionally, **Davis** makes no suggestion that a single test be used to determine if a character is valid in at least one of several contexts. Absent the examiner pointing out some teaching or incentive to modify **Davis** to determine whether a character in a string is valid in at least one of several contexts, one of ordinary skill in the art would not be led to modify **Davis** to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify **Davis** in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

II. 35 U.S.C. § 103. Obviousness: Claims 3, 11, and 19

Claims 3, 11, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over **Davis**. These claims have been cancelled and their features incorporated into claims 2, 10, and 18 respectively. Therefore, claims 2, 10, and 18 will be discussed here.

Claim 2 has been amended to recite "*wherein said data structure comprises an array and further comprising the step of indexing into said array using said data value, wherein a member of said array corresponding to said data value is pointed to in response to said indexing step*". The rejection of claim 3 notes that **Davis** uses "*array-like structures in figures 8A-8F*" and that it would therefore be obvious to use an array structure. The cited array-like structure of **Davis** shows an exemplary character string, an indication of a font in which each character can be represented, the appearance of the character, and an index number. This structure is not a table that is used to look up an indication of validity; instead, this structure shows the results of **Davis'** method used on a given character string. The mere fact that **Davis** recognizes an array and can use an array would not provide a motivation to one of ordinary skill in the art to modify **Davis** to include an array for looking up the validity of a given character. To provide a motivation to modify this patent, there must be reasons why **Davis** would want to determine the validity of a character and reasons why an array would be beneficial in that context. Neither of these reasons has been demonstrated.

Therefore, the rejection of claims 3, 11, and 19, as incorporated into claims 2, 10, and 18, is now moot.

III. 35 U.S.C. § 103. Obviousness: Claims 7-8, 15-16, and 23-26

Claims 7-8, 15-16, and 23-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over **Davis** in view of **Sowler**, *Service Message Management System and Method*, U.S. Patent Publication No. 2002/0044662, April 18, 2002 (hereinafter "**Sowler**"). This rejection is respectfully traversed.

The rejection states:

> 25. Regarding claim 7 and 8, Davis discloses the use of a wide range of fonts and styles but does not explicitly disclose the use of extensible markup language (XML) syntax. However Sowler discloses the analysis and format determination of extensible markup language (XML) (para. 0106, lines 1-5 and para. 0144, lines 1-3, and figure 8). At the time of the applicant's invention, it would have been obvious to one of ordinary skill in the art to modify Davis's method to allow it to process XML documents as input, as taught by Sowler. It logically follows that the rules employed by Davis's character validation would be in accordance with extensible markup language (XML) also. The motivation for doing so would have been to be able to determine whether extensible markup language (XML) packets match the extensible markup language (XML) protocol definition at an increased speed over prior methods. Therefore it would have been obvious to combine Davis and Sowler for the benefit of increased processing speed to obtain the invention as specified in claims 7-8.

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Representative claim 7 recites:

> 7. The computer-implemented method of claim 5 wherein said character stream comprises characters in accordance with a specification for an extensible markup language, and wherein said status values are set in accordance with a set of valid characters defined in said specification.

This claim underscores the fact that this method is determining validity or a character, not the font used to display the character. The determination that a character represents a valid XML character is very different from determining a font in which the character can be displayed, as Davis does.

Further, the cited excerpts of Sowler state:

> [0106] The protocol analyser (PA) 126 has two main responsibilities, namely to establish the context for the message, and to determine the type of the data contained in the message, that is the format in which the data is in, for example html or IDENTRUS format. Each protocol handler is configured to 'understand' a particular type of message. The PA determines the type of data from the transport/main protocol used. Depending on the type of data and context of the message determined the protocol analyser selects a protocol handler, and passes the message to the selected handler. The protocol handler then strips away the message level protocol wrapper. The message is next passed to the message analyser.
>
> [0144] In an embodiment of the invention, the message 200 is an XML document. The message comprises a number of message blocks 202-214.

Sowler, paragraphs 106 and 144

Sowler is determining the type of data contained in a message so that the message can be sent to the proper protocol handler and then mentions that a message can be in XML. Neither of these paragraphs has anything to do with validating characters in an XML character string. One of ordinary skill in the art would not seek to combine these references when they are looked at as a whole.

Therefore, the rejection of claims 7-8, 15-16, and 23-26 under 35 U.S.C. § 103(a) has been overcome.

IV.   **New Claims**

Claim 27, which is representative of the newly added claims, recites:

> 27. (New) The computer-implemented character validation method of claim 1 wherein said character stream comprises characters in accordance with a specification for an extensible markup language and within said plurality of status values, a first status value indicates whether said data value represents a valid base character, a second status value indicates whether said data value represents a valid digit character and a third status value indicates whether said data value is a valid extender character.

Support for this claim can be found in the application on page 8, line 23 through page 9, line 4. This claim points, even more than the independent claims, to the fact that discovering a font in which a character can be displayed is not the same as determining if the data value represents a valid character.

Davis has no reason to determine whether a value represents a valid base character, a valid digit character, or a valid extender character. Thus, these claims are also patentable.
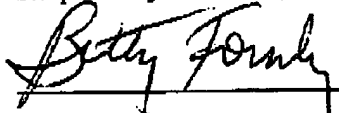
V. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

Betty Formby
Reg. No. 36,536
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Agent for Applicants

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